

Naval Surface Warfare Center (\$ in Thousands)						A. Budget Submission FY 2005 President's Budget						
B. Component/Business Area/Date Department of the Navy/R&D/February 2004				C. Line# and Description 1/Agile Chemical Facility Equipment(Replacement)			D. Site Identification NSWC Indian Head, MD					
			FY 2003			FY 2004			FY 2005			
ELEMENTS OF COST	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost			
Non ADP	1		1540	1		1500	1		2000			

Narrative Justification:

Description

This project supports consolidation of two separate chemical plants into a single consolidated agile chemical plant to be constructed by MILCON P-161. This particular portion of CPP funding will be used for the following:
 Acid storage tanks and controls
 Waste water system
 Fume scrubber system for tank farm

Justification

This equipment is in support of MILCON P-161, Agile Chemical Facility, which consolidates two separate chemical plants into one chemical plant. Neither chemical plant is configured to run all required product. The consolidation will reduce chemical process waste and personnel hazards associated with man-attendant chemical manufacturing process. This project supports the following multiple customers/program sponsors: MK46/48/54 Torpedoes, PGDN, TMETN, TEGDN, Hellfire and Brimstone.

Impact

This process will provide remote control of the process, minimizing safety risks compared to the current performance with man-attendant production of explosive chemicals.

Naval Surface Warfare Center (\$ in Thousands)						A. Budget Submission FY 2005 President's Budget						
B. Component/Business Area/Date Department of the Navy/R&D/February 2004				C. Line# and Description 2/Nitramine Intermediates System(Environmental)			D. Site Identification NSWC Indian Head, MD					
	FY 2003			FY 2004			FY 2005					
ELEMENTS OF COST	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost			
Non ADP	1		2550	1		1699						
Narrative Justification:												
Description												
Install equipment which supports the scale-up of continuous processing technology. The nitramine intermediates process creates blended energetic feedstock for use by continuous processing equipment.												
Justification												
Currently a dry grinding process coupled with a solvent/water mixing process prepares nitramine feedstocks for the continuous process. This manufacturing method produces large quantities of waste, requires handling very sensitive dry high explosive nitramines and is labor intensive. The proposed closed loop process produces a free-flowing feedstock for continuous processing. The process reduces solvent emissions by 95% and also eliminates the safety risk in the current process of grinding and mixing dry nitramines.												
Impact												
This project will enable continued development and qualification of the continuous process for gun propellant. Continuous processing is the only technology on the horizon that has the potential to improve the reproducibility of the products while reducing the safety risk, reducing waste generation and lowering the cost to operate and maintain the manufacturing capability. Next generation materials currently in R&D need this process technology. Batch processes cannot handle the demands of the new materials. Development of advanced lower cost, safer manufacturing processes for energetics such as continuous processing is core to the mission of NAVSEA Indian Head. Development of this technology to reduce the cost of next generation gun propellants for Extended Range Guided Munition (ERGM) and other Navy gun system requirements are the initial beneficiaries of this technology. Critical to the development of this advanced processing technology are innovative, environmentally clean, safe, and low cost methods of preparing raw materials for the continuous process.												

Naval Surface Warfare Center (\$ in Thousands)						A. Budget Submission FY 2005 President's Budget						
B. Component/Business Area/Date Department of the Navy/R&D/February 2004				C. Line# and Description 4/Underwater Tracking System(Productivity)			D. Site Identification Coastal Systems Station, Panama City, FL					
			FY 2003			FY 2004			FY 2005			
ELEMENTS OF COST	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost			
Non ADP				1		650	1		350			

Narrative Justification:

Description

This proposal is for equipment that will be used at the Coastal Systems Station's (CSS) Coastal Test Range (CTR). The CTR is an essential element in the mission of CSS, and supports the test and evaluation efforts associated with systems developed at CSS and elsewhere. The CTR is also an integral part of the Joint Gulf Range Complex currently being developed by the Navy, Air Force, and Army to support joint testing, training, evaluation, and experimentation in the littoral regions. The requested equipment will include cabling and baseline stations, and will expand the portable tracking range to include an area of cable connected, bottom mounted sensors. This area will be used to track objects that cannot operate in buoyed areas. It will also increase the area of the tracking range.

Justification

Increased requirements for test and evaluation of new systems being developed at CSS and the establishment of the Joint Gulf Range Complex require that the CTR be able to track underwater vehicles in real time with overlays of surface and airborne objects. Currently CSS projects requiring underwater tracking conduct testing at other tracking ranges. Transportation of personnel and equipment is expensive, and increasingly CSS projects require special infrastructure or a littoral environment not available at existing tracking ranges. Underwater tracking is required in Fleet Battle Group activities, shallow water torpedo testing, the Long Range Mine Reconnaissance project, and other CSS projects.

Impact

Without this equipment limited testing will be conducted at other test ranges. Transportation and travel costs will continue to be high, and some projects will not be able to test because of unsuitable littoral environments. Exercises in the Joint Gulf Range Complex will be unable to conduct underwater tracking.

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B. Component/Business Area/Date	C. Line# and Description	D. Site Identification		
Department of the Navy/R&D/February 2004	5/Miscellaneous (Non ADP < \$1000K; >= \$500K)	NA		
	FY 2003	FY 2004	FY 2005	
ELEMENTS OF COST	Total Cost	Total Cost	Total Cost	
TOTAL COST	1291	1110	3672	
Teradyne Spectrum (NSWC Crane Div, Crane, IN)			802	
Littoral Warfare C4I/Decision Support System (Coastal Systems Station, Panama City, FL)	690			
Electrodynamics Vibration Shaker (NSWC Dahlgren Div, Dahlgren, VA)			650	
Logistics System Simulation and Modeling Facility (NSWC Carderock Div, Bethesda, MD)		305	300	
DYNAMIC INFRARED SCENE PROJECT (DISP) (NSWC Crane Div, Crane, IN)	601			
Remote Systems Demonstration Equipment (Coastal Systems Station, Panama City, FL)		280	290	
T&E: High Speed Digital Imaging Equipment (NSWC Dahlgren Div, Dahlgren, VA)			570	
CNC Water Jet (NSWC Carderock Div, Bethesda, MD)			530	
Next Generation FLIRS (NSWC Carderock Div, Bethesda, MD)			530	
H-mate/D-mate Test Bed Upgrade (NSWC Crane Div, Crane, IN)		525		

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B. Component/Business Area/Date	C. Line# and Description	D. Site Identification		
Department of the Navy/R&D/February 2004	6/Miscellaneous (Non ADP < \$500K)	NA		
	FY 2003	FY 2004	FY 2005	
ELEMENTS OF COST	Total Cost	Total Cost	Total Cost	
TOTAL COST	7476	7941	8181	
Total number of projects = 78				

Naval Surface Warfare Center (\$ in Thousands)							A. Budget Submission FY 2005 President's Budget					
B. Component/Business Area/Date Department of the Navy/R&D/February 2004				C. Line# and Description 7/Theater Warfare Systems(Hardware)			D. Site Identification NSWC Dahlgren Div, Dahlgren, VA					
		FY 2003			FY 2004			FY 2005				
ELEMENTS OF COST		Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost		
ADP		1		1050	1		850	1		925		
Narrative Justification:												
Description												
Theater Warfare Systems (TWS) implements new ways to provide meaningful information to decision-makers for engineering, management, and warrior requirements, using innovative, commercially feasible solutions. TWS visually depicts dynamic engineering concepts in battleforce interoperability, warfare analysis, total ship, and combat systems development. Modeling, visualizations, and demonstrations are accomplished through the Joint Warrior Interoperability Demonstrations (JWID), Fleet Battle Experiments (FBE) and other exercises, experiments and demonstrations. TWS enables decision-makers to explore various system/procurement options to evaluate relative benefits and affordability in a unit/force/theater context. TWS consists of display engines networked by video switching to panel display arrays, high-power computing engines, sophisticated graphical and animation capabilities as well as interactive decision-support hardware and software. Additional visualization displays, processors, consoles, and switching capabilities will be acquired in FY04 and FY05.												
Justification												
TWS provides a cohesive environment to visualize, model, and analyze the performance of warfare systems and cost effectiveness in a unit/force/theater context. This investment significantly decreases time required to determine and document complex engineering decisions compared to traditional methods. TWS supports multiple users, especially those associated with warfare analysis, system engineering, new ship and system designs. Acquisition decision-makers can explore procurement alternatives and quickly visualize respective decision impacts through real-time, interactive simulations of various weapons systems.												
Impact												
TWS supports NAVSEA, PEO TSC, PEO SC21, PEO EXW, Land Attack, NFCS, Marine Corps, SPAWAR, and Combatant Command exercises by enhancing opportunities for joint government, industry, and coalition partnerships to demonstrate new technologies in a simulated war fighting environment. TWS provides a common operational picture encompassing live and simulated warfare operations.												

Naval Surface Warfare Center (\$ in Thousands)							A. Budget Submission FY 2005 President's Budget					
B. Component/Business Area/Date Department of the Navy/R&D/February 2004				C. Line# and Description 8/CSACT (Combat Systems Adv Concepts and Tech) Lab(Hardware)			D. Site Identification NSWC Dahlgren Div, Dahlgren, VA					
		FY 2003		FY 2004			FY 2005					
ELEMENTS OF COST	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost			
ADP	1		595	1		710	1		585			
Narrative Justification:												
Description												
The Combat Systems Advanced Concepts and Technology (CSACT) Laboratory combines several related yet independent thrusts into one cohesive whole, providing an integrated software development and evaluation environment. This investment consists of workstations networked to servers with specialized peripherals to provide a unique capability to evaluate Human System Integration and various combat system architectures and configurations.												
Justification												
The requirement to explore concepts, technologies, and configurations requires high resolution graphics and computational capability to further develop and demonstrate concepts on information and man-machine interaction as an active participant in Simulation Based Design (SBD). Workstations, high-performance processors, and high-resolution and large-screen displays will be integrated to provide a network enabling the evaluation of new architecture concepts, algorithms, and implementation strategies. Specialized peripherals will support the evaluation of Human System Integration, an increasingly important area as operational decision-makers are faced with more options for smarter weapons based on improved sensors in a crowded battlespace. The CSACT Lab is used to prototype new and existing combat control systems to ensure functionality and interoperability before deployment on Fleet ships. This capability supports sponsors such as PMS400, PMS411, PMS422, PMS500, PMS529, PMA 282, and Office of Naval Research (ONR).												
Impact												
This investment provides the necessary tools to evaluate evolving and future combat system capabilities and architectures prior to deployment to the Fleet. Advanced feasibility demonstration through analysis and prototyping are critical in the pursuit of suitable technologies. Without this equipment, the core technical competency will not be developed and maintained for surface ship combat systems technology.												

Naval Surface Warfare Center (\$ in Thousands)						A. Budget Submission FY 2005 President's Budget						
B. Component/Business Area/Date Department of the Navy/R&D/February 2004				C. Line# and Description 9/STANDARD SYSTEMS HARDWARE(Other Support Equip.)			D. Site Identification NSWC Arlington, VA					
			FY 2003			FY 2004			FY 2005			
ELEMENTS OF COST	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost			
ADP				1		1341						

Narrative Justification:

Description

Over the last several years, NSWC has emphasized standardization of business systems and consolidating computer operations for these systems to reduce costly, specialized information technology (IT) management and labor and to improve fixed asset tracking and travel. NSWC continues to standardize within the command as part of Business Process Reengineering.

Justification

Currently, we are involved with the implementation of designated DoD functional applications for financial (DIFMS), contracting (standard procurement system SPS), fixed assets (DPS) and travel (DTS). This funding allows NSWC to continue implementation of these standard systems in a common, integrated fashion.

Impact

The impact of reducing this CPP authority would be the inability to continue implementation of DoD standard systems in a common, integrated fashion.

Naval Surface Warfare Center (\$ in Thousands)						A. Budget Submission FY 2005 President's Budget						
B. Component/Business Area/Date Department of the Navy/R&D/February 2004				C. Line# and Description 10/Advanced Computing Systems(Hardware)			D. Site Identification NSWC Dahlgren Div, Dahlgren, VA					
			FY 2003			FY 2004			FY 2005			
ELEMENTS OF COST	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost			
ADP	1		242	1		405	1		490			

Narrative Justification:

Description

The Advanced Computing Systems (ACS) investments acquire technology needed for the development of advanced real-time operating systems and networks - the next generation of shipboard computing systems critical to future combat systems. These future systems will be able to process and analyze the large amounts of data required for 3D graphics, high-quality video in graphics, and speech recognition as well as provide the security needed for shipboard networks.

Justification

This investment acquires a high-speed network evaluator and an advanced network analyzer, distributed workstations networked to servers and peripheral devices, as well as network equipment. It enables the development and evaluation of advanced algorithms in a timely fashion and with a high level of fidelity and expertise. With improved man-machine interfaces through graphics and high-quality video (e.g., real-time animation), the shipboard operator will be able to significantly shorten the decision cycle. Security features of evolving technologies, key factors in the deployment of Navy communication networks, will be analyzed. New shipboard networking architectures such as shipboard wireless applications and critical network security issues will be analyzed. Areas supported include joint agency applications analysis, knowledge superiority and assurance experimentation and analysis, autonomous vehicle control technology, simulation and modeling, force protection analysis, littoral and land-attack warfare analysis for numerous sponsors including Office of Naval Research, DARPA, AEGIS, DDX, and NAVSEA.

Impact

Improved man-machine interfaces will enable manpower reduction in future combat systems. Robust security mechanisms in future combat systems are required of emerging network technologies. It is more cost effective to continue work on the development of these technologies in-house as opposed to outsourcing these efforts due to the level of expertise currently present. Maintaining older equipment with greater maintenance costs, limited availability of replacement parts, and less capability is not cost efficient.

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B. Component/Business Area/Date	C. Line# and Description	D. Site Identification		
Department of the Navy/R&D/February 2004	11/Miscellaneous (ADP < \$1000K; >= \$500K)	NA		
	FY 2003	FY 2004	FY 2005	
ELEMENTS OF COST	Total Cost	Total Cost	Total Cost	
TOTAL COST	4752	2702	1550	
Modeling and Simulation/Visualization Technology (Coastal Systems Station, Panama City, FL)	964			
State-of-the-Art Audio/Visual Centers (NSWC Carderock Div, Bethesda, MD)	410	441		
Collaborative Engineering Environment (NSWC Port Hueneme, CA)	850			
Regional Switching Center (NSWC Crane Div, Crane, IN)			800	
Remote ISEA Support Capability (NSWC Port Hueneme, CA)	800			
Science & Technology (S&T) Network (NSWC Crane Div, Crane, IN)		800		
Central Computer Facility Storage Area Network (NSWC Crane Div, Crane, IN)		703		
LINK 16 Equipment (NSWC Dahlgren Div, Dahlgren, VA)	650			
Joint Force Real-Time Analysis Center (NSWC Dahlgren Div, Dahlgren, VA)	578			
Integrated Programming Environment (NSWC Dahlgren Div, Dahlgren, VA)		208	300	
Amphibious Warfare C4I Testing Equipment (Coastal Systems Station, Panama City, FL)		250	250	
LETHALITY & WEAPONS EFFECTIVENESS COMP PHYSICS CAP (NSWC Dahlgren Div, Dahlgren, VA)	500			
Land Attack Systems Integration Laboratory (LASIL) (NSWC Dahlgren Div, Dahlgren, VA)		300	200	

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B. Component/Business Area/Date Department of the Navy/R&D/February 2004		C. Line# and Description 12/Miscellaneous (ADP < \$500K)		D. Site Identification NA
		FY 2003	FY 2004	FY 2005
ELEMENTS OF COST		Total Cost	Total Cost	Total Cost
TOTAL COST		3079	2095	2035
Total number of projects = 27				

Naval Surface Warfare Center (\$ in Thousands)						A. Budget Submission FY 2005 President's Budget						
B. Component/Business Area/Date Department of the Navy/R&D/February 2004				C. Line# and Description 13/STANDARD SYSTEMS SOFTWARE(Internally Developed)			D. Site Identification NSWC Arlington, VA					
			FY 2003			FY 2004			FY 2005			
ELEMENTS OF COST	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost			
Software	1		351	1		1300	1		2322			

Narrative Justification:

Description

Over the last several years, NSWC has emphasized standardization of business systems and consolidating computer operations for these systems to reduce costly, specialized information technology (IT) management and labor and to improve fixed asset tracking and travel. NSWC continues to standardize within the command as part of Business Process Reengineering.

Justification

Currently, we are involved with the implementation of designated DoD functional applications for financial (DIFMS), contracting (standard procurement system SPS), fixed assets (DPS) and travel (DTS). This funding allows NSWC to continue implementation of these standard systems in a common, integrated fashion.

Impact

The impact of reducing this CPP authority would be the inability to continue implementation of DoD standard systems in a common, integrated fashion.

Naval Surface Warfare Center (\$ in Thousands)						A. Budget Submission FY 2005 President's Budget						
B. Component/Business Area/Date Department of the Navy/R&D/February 2004				C. Line# and Description 14/Advanced Collaboration Integration(Internally Developed)			D. Site Identification NSWC Port Hueneme, CA					
			FY 2003			FY 2004			FY 2005			
ELEMENTS OF COST	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost			
Software				1		1950	1		1450			

Narrative Justification:

Description

This project integrates additional data resources and adds user functionality modules to the Collaborative Engineering Environment project. EDCIS/PHD Portal integration will allow desktop access to all EDCIS (Engineering Data Collaborative Information System) data and tools. The SIPRNET (Secure Internet Protocol Routed NETwork) version of the PHD Portal will be developed for all PHD (Port Hueneme Division) personnel with appropriate access. NIPRNET (Non-secure Internet Protocol Routed NETwork) and SIPRNET versions of ACI/PHD Portal will be integrated with Navy-wide initiatives: TaskForce Web, Navy Marine Corps Intanet, and ERP (Enterprise Resource Planning). The Condition and Environment Sensing and Reporting (CAESAR) tool will also be integrated with EDCIS. In FY 05, this project will be installed in all Departments; servers and COTS applications will be upgraded, and telephone and computer infrastructures will be integrated enabling improvements to Customer Relationship Manager systems.

Justification

Fleet Readiness and Distance Support Grand Challenges, as well as Fleet support in general, require availability and access to critical technical and logistical facets of higher level In-Service Engineering Agent (ISEA) data and tools. This project ensures the data is secure and accurate. It enhances collaboration, optimizes use of critical expertise and reduces maintenance and costs. It thereby supports our business plan of growth to higher level efforts without transferring cost to the fleet. To sum it up, this project facilitates effective distance support.

Impact

By exploiting emerging data integration technologies, improvements can be made in fleet support as well as product development decisions, thereby improving fleet readiness. Access to integrated data sources provides the best valued solution. It will provide the collaborative structure which will contribute to achieving planned wedge savings.

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B. Component/Business Area/Date	C. Line# and Description	D. Site Identification		
Department of the Navy/R&D/February 2004	15/Miscellaneous (Software < \$1000K; >=\$500K)	NA		
	FY 2003	FY 2004	FY 2005	
ELEMENTS OF COST	Total Cost	Total Cost	Total Cost	
TOTAL COST	747	400	900	
STANDARD SYSTEMS SOFTWARE Crane Div (NSWC Crane Div, Crane, IN)	597			
Facilities Automated Support Technologies (FAST) (NSWC Carderock Div, Bethesda, MD)	150		600	
System Supportability Modeling & Sim. Environment (NSWC Port Hueneme, CA)		400	300	

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B. Component/Business Area/Date	C. Line# and Description	D. Site Identification		
Department of the Navy/R&D/February 2004	17/Miscellaneous (Minor Construction < \$1000K; >= \$500K)	NA		
	FY 2003	FY 2004	FY 2005	
ELEMENTS OF COST	Total Cost	Total Cost	Total Cost	
TOTAL COST	2711	4890	4400	
LCC Support Building (NSWC Carderock Div Det, Memphis, TN)	959			
Building 41 Egress/Stairways (NSWC Crane Div, Crane, IN)	925			
TEAMS CX Engineering Center (NSWC Dahlgren Div, Dahlgren, VA)	827			
Administrative and Light Lab Space (NSWC Carderock Div, Bethesda, MD)			750	
Enhance Smart Weapons Facility (NSWC Crane Div, Crane, IN)		745		
Topside Integrated E3 Laboratory (NSWC Dahlgren Div, Dahlgren, VA)			744	
Photo Lab Conversion - B121 (NSWC Dahlgren Div, Dahlgren, VA)		742		
Prototype Assembly Facility (Coastal Systems Station, Panama City, FL)		740		
Warfare Analysis Building (NSWC Dahlgren Div, Dahlgren, VA)			739	
Information Technology Space Conversion (NSWC Dahlgren Div, Dahlgren, VA)			730	
Electric Gun Pulsed Power Facility (NSWC Dahlgren Div, Dahlgren, VA)		727		
RDT&E Support Center (NSWC Carderock Div, Bethesda, MD)		725		
Ship Systems Support Facility (NSWC Carderock Div, Bethesda, MD)			725	
Reconfigure Intersection (NSWC Crane Div, Crane, IN)			712	
Magnetic Treatment Facility Modifications (NSWC Carderock Div, Bethesda, MD)		675		
Relocate Chemistry Lab (NSWC Crane Div, Crane, IN)		536		

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B. Component/Business Area/Date	C. Line# and Description	D. Site Identification		
Department of the Navy/R&D/February 2004	18/Miscellaneous (Minor Construction < \$500K)	NA		
	FY 2003	FY 2004	FY 2005	
ELEMENTS OF COST	Total Cost	Total Cost	Total Cost	
TOTAL COST	2592	2137	3756	
Total number of projects = 55				